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Republican Election Vows Spell Trouble for Science

Republican rhetoric and personalities were under scrutiny last week as the capital's science-policy community searched for signs of how the federal research enterprise will be affected by the GOP's control of the House and Senate.

The likelihood of hard times ahead is suggested by the structure of the federal budget and Republican campaign vows of savage spending reductions. There are some grounds for believing that science may elude the axe, but they're mainly based on history, rather than current politics and finance. For decades, research budgets in virtually all fields have generally been exempted from partisan conflict. Research spending rose briskly under Reagan, despite his holy war against domestic spending. And it didn't do too badly under Bush.

The feared difference arises from the Republicans' success in hitting rich political paydirt with the anti-spending, anti-tax theme. They're promising to deliver huge reductions in federal outlays, far beyond the slowdown in spending initiated by the Clinton Administration. The gloomiest analysis says that regardless of warm feelings for research and related matters, budget politics is on automatic pilot toward spending reductions—with one exception, defense, which Republican campaigners singled out as dangerously neglected by the Clinton Administration.

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The most politically reachable part of the federal budget is so-called discretionary spending—i.e., money for programs financed from year to year, with no guarantee of longevity. Money for research, though regularly forthcoming, is in the discretionary category, in contrast to farm subsidies, veterans benefits, and other so-called entitlements. Discretionary spending accounts for about one-third of Washington's $1.5 trillion budget, and half of the discretionary money goes to the Pentagon. The rest, including civilian R&D funding, is what most of the f ghting is about.

As far as intentions regarding research are concerned, there's a documentary clue: A list bearing a Republican imprimatur, pinpointing a sizeable collection of federal research agencies and programs as "possible" candidates for reduction or elimination (Box, P. 2).

The list, which has received little attention, is an offshoot of the highly publicized "Contract With America" issued by Republican House candidates, incumbent and aspiring, on September 27. The Contract is a vintage anti-government fantasy, replete with promises of a balanced-budget amendment, tax cuts, term limits, the line-item veto, and "restoration of the essential parts of our national security funding."

The Contract stated that the House Budget Committee would be asked to propose additional budget savings.

A few days later, the Republican staff of the Budget Committee, heretofore an unheeded minority, produced a 71-item hit list of agencies and programs, with savings over five years calculated at $113 billion in discretionary spending.

For the status quo, the list is a shocker. However, its role in Republican Congressional planning is far from clear. The list was the work of a House Committee staff, and emerged without endorsement from above. It also carried a tentative-sounding label: "Examples of Possible Offsets for Contract

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In Brief

Legions of science-policy staffers will be pouring off Capitol Hill in quest of employment in January as the new Republican majority takes over committees dominated for decades by Democrats, who reserved the lion's share of jobs for their own appointees. Of 80 slots on the House Science, Space, and Technology Committee, 60 were filled by Democratic choices. The long-deprived Republicans are expected to maintain similarly lopsided ratios. But the number of jobs will shrink sharply if the victors fulfill their campaign pledge of a one-third reduction in staff and merging of some committees.

Science Committee Chairman George Brown Jr. (D-Calif.) barely retained his seat, 56,924 to 54,496. Revered by the scientific community, though, as usual, ignored by his favor-seeking adulators at election time, Brown becomes ranking minority member on the Committee.

Another staff bloodletting will take place at the House Energy and Commerce Committee, stronghold of the no-longer-feared Chairman John Dingell (D-Mich.). Legendary for stacking the committee with his own appointees, Dingell won by a wide margin. He, too, recedes to ranking minority member, a toothless position.

Not yet clear is the Dingell succession. In the lead is Rep. Thomas Bliley Jr., an old friend of the tobacco industry from Richmond, Va. Bliley may take the Committee chairmanship or head its Health Subcommittee, source of legislation for NIH and many health programs, long chaired by Henry Waxman, who was reelected by a big vote. Or Bliley could take both posts, following the example of Dingell, who chaired the full Committee and its Oversight and Investigations Subcommittee. Either way, Bliley says there's no need for more tobacco legislation.

. . . Uncertainties Remain in Filling Committee Chairs

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With America."

The list was rapidly eclipsed by the excitement of the closing days of the campaign, and nothing has been heard about it since. But as can be seen from the list's research-related items, the House Budget Committee minority staff members who put it together were thinking about what many in the scientific community would regard as unthinkable—the elimination of several old-line federal research agencies and reductions in well-established research and cultural programs. Capitol Hill is in the early post-election stages of sorting out its committee assignments and staff arrangements, but the election returns mean that the former minority-party employes will be staffing the committees when the 104th Congress goes to work.

Since committee chairmanships carry baronial powers in the Congress, Washington has been eagerly speculating about these posts. The appointments will be settled when the Congress reconvenes at the end of November to organize itself for the next session. In the meantime, an intricate version of musical chairs is under way on Capitol Hill as the long-suffering members of the new Republican majority savor their victory and maneuver for position. Some spots are all but officially accounted for, but at this early stage, a good deal of uncertainty remains.

Seniority is usually the most influential factor for filling the chairs, but it's not always the determining ingredient. On the House Science, Space, and Technology Committee (HSS&T), for example, Rep. Robert S. Walker of Pennsylvania is the senior Republican. By rank, he is thus the heir apparent. He's been closely engaged in the business of the committee, which is not the case with many members. The latest word, however, is that Walker has ambitions beyond a committee chairmanship, and plans to run for a position in the House leadership.

Next in line for the HSS&T Chairmanship: Rep. F. James Sensenbrenner, of Wisconsin, but he might prefer the Chairmanship of the Judiciary Committee, where he ranks just behind Rep. Henry Hyde, of Illinois, another likely prospect for a leadership job under Gingrich. If Sensenbrenner takes the Judiciary post, the next in line for heading HSS&T would be Rep. Sherwood L. Boehlert, of New York, a quirky, entertaining legislator who describes himself as "the last Rockefeller Republican."

Boehlert was in the vanguard of opposition to the Superconducting Super Collider, and probably did as much as any member of Congress to throttle the project. Initially, he was peeved by the Department of Energy's refusal to consider a New York site straddling the US-Canadian border for what DOE disingenuously described as an "international" project. But mainly he opposed the SSC because of its budget overruns and repeatedly misleading cost estimates. In general, however, Boehlert has been a science booster.

Funding for health research, the least partisan item on the Congressional agenda, seems bound to remain in friendly hands in both houses. Senator Mark Hatfield, of Oregon, a longtime supporter of the National Institutes of Health, is almost certain to be the next Chairman of the Senate Appropriations Committee, where he's been an active member of the Subcommittee for NIH. This year, Hatfield joined with Democratic Senator Tom Harkin, of Iowa, Chairman of that Subcommittee, in proposing a medical-research trust fund financed by small additions on health-insurance premiums. The proposal sank with health-care reform, but Hatfield's endorsement is testimony to his devotion to biomedical

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R&D Budget Hit List

Titled "Examples of Possible Offsets for Contract With America," here's the list issued last month by the Republican staff of the House Budget Committee, with dollar amounts for "total 5 yr savings" in 71 agencies and programs, of which the following are in areas of science, technology, and higher education. (If entries are unclear, remember, the list was hurriedly produced in the heat of the campaign):

Reduce Educational and Cultural Exchanges, $276 million.

Limit Rate of Growth for NSF, $346 million.

Reduce Funding for Energy Tech. Development, $2.1 billion.

Abolish Bureau of Mines, $872 million.

Abolish Geological Survey, $3.2 billion.

Abolish National Biological Survey, $139 million.

Downsize Minerals Management Service, $465 million.

Freeze Funding for NOAA, $805 million.

Reduce Funding for Resource Conservation and Development, $610 million.

Reduce Funding for Coop. State Research Serv., $331 million.

Extension Service Refocus, $505 million.

Reduce Agricultural Research Service, $830 million.

Reduce Spending for the High Performance Computing Program, $1.2 billion.

Eliminate the Advanced Technology Program (in the Department of Commerce), $819 million.

Reduce Arts and Humanities, $531 million.

Convert Campus Based Aid, $2.8 billion.

Reduce the Overhead Rate on Federally Sponsored University Research, $1.6 billion.

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HHS Commission on Research Integrity Plods On

Few in the scientific community have reason to be aware of the periodic meetings of the Commission on Research Integrity, created by Congress last year to promote the purity of science within the Department of Health and Human Services. While operating in the open, it has received little publicity, though its potential for influence is considerable.

Having missed the first four monthly-or-so meetings since the Commission went into business last June, SGR attended the fifth, November 7 at the National Institutes of Health. It was in the main a wandering, inconclusive bull session, with participation by several eminences of the science establishment, plus a few "whistleblowers" alleging official softness toward scientific misdeeds. By and large the quality of the discussions would be a credit to a high school honors seminar. The Commission consists of 12 very busy professionals, from academe, research, law, etc. How they could spend a day like that is difficult to understand, but that's their affair.

The Commission is scheduled to report to the Secretary of HHS and expire at the end of 1995, but because of a delayed start, Chairman Kenneth John Ryan, of the Harvard Medical School, plans to request a six-month extension. However, given the languid pace and discursiveness of the most recent session, a mere six months more could be too little by far.

The centerpiece of the morning discussion concerned the appropriateness of the Department's definition of "scientific misconduct." The first part—"fabrication, falsification, plagiarism"—seems to be universally accepted, though with some quibbles about plagiarism. All agree it's evil, but some self-styled legal logicians in the ranks of science take the view that theft of another's words can occur inadvertently.

The major conflict over the definition of scientific misconduct concerns the second part of the official wording, which refers to "other practices that seriously deviate from those that are commonly accepted within the scientific community for proposing, conducting, or reporting research."

Some people feel that the "deviation" clause is dangerously vague, among them Samuel C. Silverstein, Chairman of Physiology and Cellular Biophysics at Columbia University's College of Physicians and Surgeons. Testifying to the Commission as President of the Federation of American Societies for Experimental Biology, many of whose 42,000 members depend on NIH grants, Silverstein argued that the deviation clause "implies that the scientific community is a defined entity."

Not so, he said, arguing that "Practices that are commonly accepted by behavioral scientists for proposing, conducting, or reporting data may be rejected wholly or in part by chemists and molecular biologists." Scientific societies, he said, should establish the standards for their disciplines.

Has FASEB set standards for its members? asked Drummond Rennie, a Commission member who is a Deputy Editor of JAMA and Adjunct Professor at UC San Francisco.

No, Silverstein replied: "We have not addressed ourselves to standards. Perhaps we should."

Raising another objection to the deviation clause, Silverstein warned that it could be invoked against pioneers of innovative scientific concepts and techniques.

Give an example, said Thomas M. Devine, Legal Director of the Government Accountability Project, a Washington public-interest organization. Appearing to think hard, Silverstein cited the bizarre case in 1988 of *Nature* magazine investigating claims of biological activity in super-diluted solutions in the laboratory of a French researcher, Jacques Beneviste. The investigation was an outrageous intrusion, Silverstein suggested, apparently referring to the presence of a magician on *Nature's* team.

Asked for another example, Silverstein said he couldn't think of one. Rennie then denounced the argument about restraints on innovation as a "straw man."

Next up was Howard Schachman, Professor of Biochemistry and Molecular Biology, UC Berkeley. His views on NIH matters receive close attention because he's an old friend of NIH Director Harold Varmus, whom he officially serves as a wandering scout around the scientific community, under the title of ombudsman. *(Continued on Page 4)*

Congress

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research.

In the House, Rep. Joseph McDade, of Pennsylvania, is in the senior spot for the chairmanship of the Appropriations Committee. But there's a problem: he's under indictment for corruption. Next in line for the Appropriations Chairmanship is Rep. John T. Myers, of Indiana, who serves on the Agriculture Subcommittee.

The Chairmanship of the full House Appropriations Committee is thus in some doubt. But on the Subcommittee that deals with the NIH budget, a well-established supporter of NIH, Rep. John Edward Porter, of Illinois, is expected to become Chairman.

Earlier this year, after Hillary Clinton charged that Republicans are shortchanging biomedical research, Porter and other Republican members of the Subcommittee responded that it wasn't so, and attacked Clinton for what they said were skimpy budgets for NIH [SGR, March 15: "Republican Backers of NIH Enraged by Hillary's Speech"].

As for other chairmanships: some are for sure, others are yet to be settled. The final list will be done in a couple of weeks. And then, following a holiday-season respite, a long spell of rough stuff will begin between the Clinton White House and the Republican Congress.

Research budgets are minor stuff on this battlefield. But they're vulnerable because of their location in the discretionary part of the budget and the scientific community's timidity about fighting for federal money. The Contract With America promises a lot of anti-spending activity within the first 100 days of the next Congress.

. . . Varmus Says Deviation Clause Is "Too Vague"

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Schachman, obsessed by visions of federal gumshoes invading academic laboratories, urged recognition of the difference "between research fraud and irritating behavior." Asserting that "the creative instincts of the individual must be protected," even if manifested in an obnoxious fashion, Schachman also warned against oppressive efforts to stamp out scientific misdeeds.

A rambling discourse then ensued on the topic of plagiarism. S. Andrew Schaffer, General Counsel of New York University, observed that undergraduates are routinely disciplined, even expelled, for "failure to attribute" in their papers. Demonstration of intent, he said, is not required. Schachman responded that fabrication and falsification cannot occur without intent, but plagiarism, he insisted, could be unintentional.

The Commission then heard from NIH Director Varmus, who came out against the deviation clause, describing it as "too vague," and warning that it can be "invoked in inappropriate circumstances." Criminal law, employment and antiharassment regulations, and other measures should be applied to violations outside of fabrication, falsification, and plagiarism, he said. Varmus added that the big three "occur frequently enough to be a concern, but not so frequently that the fabric of science is unraveling." On the whole, he said, the concerns about misconduct are beneficial for science.

Commenting on the tutoring in ethics that Public Health Service regulations require at institutions holding PHS training grants, Varmus expressed approval, but warned, "Training programs are not likely to have much effect on psychopaths." And he cautioned, "To avoid persecution of the innocent, we must acknowledge that we're imperfect beings."

Commission member Linda L. Emanuel, Assistant Director in the Division of Medical Ethics at Harvard Medical School, lamented a shortage of research on "issues of integrity." Varmus agreed, saying it would be useful to know "what works and how to judge the effectiveness of methods." Emanuel asked whether it would be desirable for science to emulate the medical profession and adopt licensing examinations, including questions about ethics. After pondering that one, Varmus said he preferred to build ethics into training programs.

The importance of pressure from outside for universities to uphold ethical standards was stressed by another member of the Commission, Kristina Gunsalus, Associate Vice Chancellor for Academic Affairs at the University of Illinois, Urbana-Champaign. Universities are slow to learn from each other, she noted, adding that "best practices" in dealing with misconduct travel slowly in the absence of external prodding.

Chairman Ryan recalled that at a meeting on misconduct at the National Academy of Sciences last June [SGR, June 15: "The Misconduct Follies: Wow, What a Conference!"], a woman from NIH said she wouldn't dare be a whistleblower. Some members questioned the accuracy of that recollection. No one was sure. But Gunsalus agreed that "people are reluctant to be whistleblowers."

Rennie then brought up the problem of "rotten behavior," as distinguished from scientific misconduct, and observed that ethics courses are sometimes taught by "the seamier sorts of people." How can better people be attracted to these teaching roles? he asked Varmus.

"Make it interesting," Varmus replied, referring approvingly to MIT's use of a docu-drama format to liven up ethics courses.

Next to address the Commission was Samuel Broder, Director of the National Cancer Institute, paymaster for the tainted multi-center breast-cancer trials administered by the University of Pittsburgh. Though obviously heartfelt, his presentation was not a model of rhetorical lucidity.

Declaring opposition to "authoritarianism" in the surveillance of research, Broder observed that "it's not simple to have a headquarters institution investigate other institu-

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Roster of the Commission

Chairman: Kenneth J. Ryan, Professor of Obstetrics, Gynecology and Reproductive Biology, Harvard Medical School; Chairman, Ethics Committee, Brigham and Women's Hospital.

Carol Ann Kemp Aschenbrener, Chancellor, Medical Center, University of Nebraska.

Eugene H. Cota-Robles, Professor Emeritus, Biology, UC Santa Cruz.

Thomas M. Devine, Legal Director, Government Accountability Project, Washington, DC.

Linda L. Emanuel, Assistant Director, Division of Medical Ethics, Harvard Medical School.

C. Kristina Gunsalus, Associate Vice Chancellor for Academic Affairs, University of Illinois at Urbana-Champaign.

Karl J. Hittelman, Associate Vice Chancellor, Academic Affairs, UC San Francisco.

Drummond I. Rennie, Deputy Editor (West), JAMA; Adjunct Professor of Medicine, Institute for Health Policy Studies, UC San Francisco.

Priscilla Ann Schaffer, Professor, Department of Microbiology and Molecular Genetics, Harvard Medical School.

S. Andrew Schaffer, Adjunct Professor of Law; Senior Vice President and General Counsel, New York University.

Judith P. Swazey, President, Acadia Institute, Bar Harbor, Maine.

Carolyn Dickson Whitfield, Associate Professor, Department of Biochemistry and Molecular Biology, Howard University College of Medicine.

. . . System Breeds Cynicism, Commission Is Told

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tions"—a reference to the sprawling network of hospitals involved in the breast-cancer trials, perhaps the worst public-relations debacle in recent biomedical history.

But, Broder went on, "The public wants to know issues of scientific misconduct as they are unfolding." Likening episodes of such misconduct to a plane crash, he added that "The public wants to know these things in real time."

In clinical trials, Broder asserted, "scientific misconduct must be viewed as an adverse event." Patients are outraged, he said, if their participation is considered invalid because of misconduct by the investigators.

When unverified accusations are made, Chairman Ryan asked, how can both the public and innocent investigators be protected? By including "disclaimers" in the disclosure of allegations, Broder replied, adding that the "public is pretty smart."

Opening the afternoon session, Chairman Ryan said he wanted the Commission to "get into issues of authorship," noting that he had heard many complaints from junior scientists about "having the professor take away their research." The agenda, however, prescribed other topics, starting with a brief, unnotable report on "Research Integrity Activities in the NIH Intramural Program."

Next to address the Commission was a veteran of efforts by government and science to deal with scientific misconduct, Suzanne Hadley. Hadley served as Acting Director of the old Office of Scientific Integrity at NIH, the predecessor of the present Office of Research Integrity (ORI), and later as an investigator for Congressman John Dingell's forays into scientific integrity.

Discussing ORI's stinging rebuffs by the lawyers on the bench of the Health and Human Services Departmental Appeals Board, Hadley described the Board as "a disaster for science." This is "not because the Board members are intellectually incapable of understanding complex scientific facts," she continued, "but because the Board members have no awareness, much less any appreciation, of the vital importance to science of truth, because the Board's rulings, correspondingly, have too often made a mockery of responsible conduct in research."

Hadley said that the Appeals Board "has shown itself to be unremittingly hostile toward, even disdainful of, ORI," which suffers, she said, from the Board's "debasing influence."

"At ORI," she continued, "the Board's standards have become the lowest common denominator against which cases are measured, at the very outset. Those cases judged not to be winnable before the Board may not even be taken up, no matter how outrageous the suspected misconduct. Truly the system is turned on its head," Hadley declared, adding that leadership on misconduct issues is not evident at the Departmental level.

Finally, she urged reconsideration of the role of lawyers in misconduct proceedings, acknowledging that they have a place, but that their objective—to spring their clients—conflicts with science's quest "to determine the truth."

With urgings for brevity because the proceedings were behind schedule, the Commission then heard from the two researchers who, a decade ago, ignited the interest in scientific misconduct that still persists, Walter Stewart and Ned Feder. Despised by the establishment for their caustic assessments of scientific integrity, the two have been barred from misconduct researches on NIH time and reassigned to routine administrative chores. As best as they can, on this basis, they continue to investigate and pronounce on issues of scientific integrity.

Though their oral presentation was cut short by the cramped agenda, their testimony was circulated in a prepared paper rich in gritty observations about the ethical state of contemporary science.

Those who report offenses, they said, risk damage to their careers, even when the allegations are substantiated. And federal officials responsible for assuring scientific integrity have given no recognition to those who take such risks, they noted, citing the case of Margot O'Toole, whose questions about a paper co-authored by Nobelist David Baltimore led to one of the most publicized misconduct cases of recent times. "Her allegations were subsequently verified in great detail," the Stewart-Feder paper noted, despite efforts by "Faculty and officials at two major universities [MIT and Tufts] to discredit her. They have since done nothing to make amends. Neither the past nor present head of NIH or DHHS [Department of Health and Human Services] has spoken out to thank her or to honor her publicly," they noted.

Many young scientists, they continued, regard the required courses on scientific integrity "as exercises in hypocrisy."

"The plain fact," the Stewart-Feder presentation continued, "is that cheating pays—just don't get caught. And if you see the rules getting broken, keep your mouth shut or you will be the target of reprisals by your colleagues and their higher-ups. Many of the papers being published these days exist only to provide entries in the bibliographies appended to c.v.'s of applicants for hiring, promotion, tenure, and awards. The actual papers are not usually read by anyone but their authors. So if there is something a little strange in a paper that has your name on it, no one will check. And if you have reached a senior position in your institution, nothing will happen to you if you do get caught. This is the cynical view of most of our younger colleagues, and it worries us very much, because it is largely justified."

Expressing doubt about the willingness of universities to expose and discipline scientific misdeeds in their laboratories, Stewart and Feder proposed a solution based on the model of the National Collegiate Athletic Association for policing academic sports.

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News Notes: "Science" Editorship, Bromley, Etc.

How goes the search for a successor to Daniel E. Koshland Jr., who announced last year, with a bit of prodding, that he plans to leave the editorship of *Science* when he completes a decade in the job at the end of this year?

No decision yet, but the scouting process is in an advanced stage, SGR was told last week by Professor Sherwood Rowland, of UC Irvine, Chairman of a 10-member search committee established by the Board of the American Association for the Advancement of Science, publisher of *Science*. Rowland said that from responses to advertisements and other cues, the committee has selected a field of 45 possibilities. He said he's trying to orchestrate a conference call with the committee so that three to five names could be submitted to the Board by mid-December.

The target date for making the appointment is sometime in 1995, he said, noting that Koshland has said he's willing to stay on until a successor is in place.

Scientific eminence, one of the major criteria established by the Board, has been fairly easy to satisfy, Rowland said, but a requirement of substantial editorial experience has proven to be more difficult. Many candidates of scientific distinction have some publishing experience, Rowland said, but "nothing on a week-after-week basis."

Koshland has held the job on a part-time basis while holding a professorship at UC Berkeley. In *Science's* Washington offices, Koshland's absentee editorship is regarded by many as a blessing, though there's also a feeling that a heavyweight weekly requires full-time attention. Rowland told SGR it's up to the AAAS Board to decide whether the new editor will work full- or part-time.

Koshland is credited with increasing the journal's pulling power for important research papers and beefing up its news department. However, in Washington policy circles and beyond, his editorials earned him an indelible reputation as a lightweight, while his labored efforts at humor regularly evoked laughter, but not for the reasons he intended.

Back in Washington last week to plug his book about his service as George Bush's Science Advisor, *The President's Scientists* (Yale University Press), D. Allan Bromley directed some uncharacteristically harsh words at the State Department.

Talking about international collaboration and cost-sharing on scientific mega-projects, Bromley said, "All [Presidential] Science Advisors have failed miserably in dealing with the State Department," adding: "Maybe someday State will establish an American desk."

Bromley's remarks, to a periodic science-policy meeting sponsored by the AAAS and George Washington University, were inspired by a question about the fate of the Superconducting Super Collider. The SSC project collapsed, he said, because "We focused on competition with other countries, rather than cooperation." If it had been a "truly international" project, Bromley asserted, it would have succeeded.

What also came out during the meeting is that back at Yale, where he spent most his career as a nuclear physicist, Bromley has a new job: Dean of Engineering.

Meritorious work is being performed by a little-known outfit, the Gas Research Institute (GRI), according to an editorial in the October 21 issue of *Science*.

Signed by Philip H. Abelson, Deputy Editor for Engineering and Applied Sciences, the editorial says the Chicago-based GRI, with a budget of $200 million a year, "manages R&D for the benefit of many facets of the natural gas industry, including production of raw gas, processing of it, transmission, local distribution.... It also conducts environmental R&D, some of it devoted to better means of cleaning up ancient and modern production sites."

"As result of GRI-managed R&D," the puff piece continues, "improved processes have been devised and demonstrated for finding, producing, and processing raw gas. In these instances and others in which improvements are demonstrated, GRI is active in transferring technology to the many components of the natural gas industry."

Not mentioned in this encomium is author Abelson's membership on the GRI Research Coordinating Council, which meets three times a year, plus his membership on a divisional panel that meets once annually.

SGR hears that November 28 is the scheduled release date for the long-awaited report from the Office of Research Integrity on its marathon investigation of Theresa Imanishi-Kari, of Tufts University, accused of scientific misconduct in a collaboration with Nobelist David Baltimore. The reported finding is that she did indeed fabricate research data. She has a right to appeal, and is expected to do so.

Commission *(Continued from Page 5)*

"No one burdens the President of Notre Dame," they said, "with the responsibility of dealing impartially with accusations of a recruiting scandal by the head football coach.... Is a biochemist with a million-dollar NIH grant that different from the football coach? Yet NIH," they continued, "requires each institution to investigate cases of alleged misconduct before the Office of Research Integrity becomes involved."

Proposed solution: "Let a group of two dozen universities set up an investigating organization. Name it, say, the Diogenes foundation, after the founding Cynic. Let them agree to refer all allegations of fraud and misconduct involving their own faculty and student body for investigation by Diogenes and his assistants."

The proposed foundation was easily the most interesting idea to come before the Commission all day, but it did not raise much interest, and the meeting moved on to other matters.

The next meeting is scheduled for December 1-2, at the Washington Dulles Airport Marriott hotel.—DSG

In Print

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From the Congressional Office of Technology Assessment (OTA):

International Comparisons of Administrative Costs in Health Care (GPO Stock No. 052-003-021398-3; 74 pp., $5.50), while conceding the difficulties of defining administrative costs and comparing them in various countries, OTA estimates that a Canadian-style single-payer system could reduce US health-care spending by nearly $100 billion annually. Other approaches to reform would save smaller but still substantial amounts, the report says. The study focuses mainly on Canada, but also discusses France, Germany, and the UK and refers also to several other countries. Rosemary Stevens, University of Pennsylvania, chaired the OTA advisory committee for the report. Michael E. Gluck, of the OTA staff, was Study Director.

Also available, a related OTA report published in 1993: ***International Health Statistics: What the Numbers Mean for the United States*** (GPO Stock No. 052-003-01354-1; 176 pp., $11).

Civilian Satellite Remote Sensing: A Strategic Approach (GPO Stock No. 052-003-01395-9; 166 pp., $12), says the US should develop plans for more efficient use of remote sensing capabilities by harmonizing federal programs and collaborating with the private sector and other nations. Despite the high performance of the Landsat program and markets for its data, OTA says, the US tends to regard it "more as a research effort than a fully operational one." To encourage commercial development of remote sensing systems, OTA suggests, Congress should consider encouraging NASA and other agencies to purchase data. The report was prepared under an advisory panel chaired by Rodney Nichols, CEO of the New York Academy of Sciences. Ray Williamson of the OTA staff was Project Director.

Order from: New Orders, Superintendent of Documents, PO Box 371954, Pittsburgh, Pa. 15250-7954; tel. 202/512-1800; fax 202/512-2250.

From the federal multi-agency Information Infrastructure Task Force:

National Information Infrastructure [NII]: Progress Report, September 1993-1994 (GPO Stock No. 003-000-0675-1; 80 pp., $6.50), an inventory of plans and developments in the NII, about which Vice President Gore says in an introductory letter: "This seamless web of communications networks including computers, televisions, telephones and satellites will forever change the way we live, learn, work and communicate with each other here in the United States and around the world." The report describes the Clinton-Gore NII grand plan, activities in federal agencies, legislative developments, and lists various advisory groups, recent publications, Congressional testimony, etc.

Order from: New Orders, Superintendent of Documents, PO Box 371954, Pittsburgh, Pa. 15250-7954; tel. 202/512-1800; fax 202/512-2250.

From the Committee on Interagency Radiation Research and Policy Coordination (CIRRPC):

Catalog of Publications (4 pp., no charge), lists the many reports from this little-known government organization, established in 1984 by the White House Office of Science and Technology Policy, with membership drawn from throughout the federal establishment. Among recent publications: ***Balancing Radiation Benefits and Risks*** (published last April, 52 pp., no charge), which frets that the public often perceives radiation risks "as being much greater than they really are." To calm the untutored, the report recommends establishment of a "Federally sponsored, independent National Radiation Information Center...to communicate information on radiation issues to the general public."

Order from: Publications, Oak Ridge Associated Universities, 1019 19th St. NW, Suite 700, Washington, DC 20036; tel. 202/653-5813; fax 202/653-5414.

From the General Accounting Office (GAO), no charge:

Nuclear Health and Safety: Consensus on Acceptable Radiation Risk to the Public Is Lacking (GAO/RCED-94-190; 31 pp.), says radiation-exposure standards vary widely and senselessly among federal regulatory agencies responsible for protecting public health. "Ineffective" is the term applied by GAO to coordination efforts between the Environmental Protection Agency and the Committee on Interagency Radiation Research and Policy Coordination. The GAO expends no praise either on the Nuclear Regulatory Commission or the Department of Energy, bunching them with the others in failure to develop common standards, which it attributes to "the historical lack of a unified federal framework for protecting the public from radiation exposure."

Order from: USGAO, PO Box 6015, Gaithersburg, Md. 20884-6015; tel. 202/512-6000; fax 301/258-4066.

In Print

Official reports and other publications of special interest to the research community

(Copies of publications listed here are available from the indicated sources—not from SGR)

From the National Science Foundation Division of Science Resources Studies (no charge):

Federal R&D Funding by Budget Function: Fiscal Years 1993-95 (NSF 94-319; 51 pp.), reports R&D spending on defense, health, transportation, etc. by the 21 departments and agencies that account for virtually all federal R&D activities, up through the Clinton Administration's budget proposals for fiscal 1995, which began October 1. Some budget details are traced over many years prior to '93-'95 span in the title. One table shows the shares of federal R&D for defense and civilian purposes, starting in 1955, when the Pentagon received 84.9 percent of the R&D budget, to this year, for which Clinton proposed 55.3 percent for defense R&D.

Other statistical highlights: health accounts for 44 percent of all federal basic research spending; human genome research receives 21 percent of the Department of Energy's $331 million budget for biological and environmental research, and the big five in federal R&D spending (defense, health, space, general science, and energy) get 90 percent of the money. Slivers of 1-3 percent each are allotted to the rest, among them agriculture, social-science, housing, and transportation research. The '95 figures in this report are Clinton's proposals, rather than the Congressional outcome, but the two are pretty close.

Science and Engineering Degrees: 1966-91 (NSF 94-305; 92 pp.), covers bachelor's, master's, and doctoral degrees in the natural, physical, and social sciences, math and engineering, with the data organized by discipline, degree level, gender, and percentage of age group receiving degrees.

Science and Engineering Research Facilities at Universities and Colleges: 1994 (Volume I, Analysis, NSF 94-315; Volume II, Detailed Statistical Tables, NSF 94-316), fifth in NSF's biennial surveys of the quantity, condition, and financing of lab space in higher education. Problems are mounting out there, NSF reports, with construction funds in 1992-93 down about 10 percent from the previous year, for the first drop since 1986, when the surveys began. Spending on repairs and renovations slipped, too, but only a bit. The schools reported $5.7 billion in "unfunded and deferred" capital projects. The current Congress responded to the cries for help by expanding NSF's facilities program from $110 million to $250 million. However, the availability of the full amount was made contingent on White House support for another $250 million in the next fiscal year—by no means certain as Clinton strives to project an anti-spending image.

Academic Research Instruments and Instrumentation Needs: 1992 (NSF 94-321; 44 pp.), based on a survey of 55 colleges and 24 medical schools, the report, latest in a series that began in 1983, says that funding is generally keeping pace with instrument needs, though some serious gaps exist. NSF was the largest source of federal funds for academic instruments, with $191 million, or 14 percent of the national total, in 1992; NIH was close second, with $185 million. The rest came from inhouse sources, state governments, and industry, with the latter providing $103 million, 8 percent, of the total.

Publications List: FY 1989-93 (NSF 93-321; 19 pp.), a catalog from NSF's Division of Science Resources Studies, the main source of statistical data on federal R&D and related educational activities. Included are ordering information and instructions for electronic access.

Order from: National Science Foundation, Division of Science Resources Studies, Arlington, Va. 22230; tel. 703/306-1780; fax 703/644-4278; e-mail srspubs@nsf.gov.

From the American Society for Engineering Education (ASEE):

Engineering Education for a Changing World (28 pp., single copies free; $7 after December 1), with heavyweight academic and corporate backing, another report calling for closer ties between engineering education and government and industry. Going out on a limb, the savants declare, "We live in a time of revolutionary change," and assert that engineering education should be "relevant, attractive and connected."

Among several recommendations: creation of "industrial professorships" in engineering colleges, jointly financed by the federal government and industry, with tax incentives suggested as a sweetener for the latter. A study leading to the report was headed by John McTague, Ford Motor Co. VP for Technical Affairs, and Deans of Engineering Eleanor Baum of Cooper Union and Earl Dowell of Duke University. An advisory council for this venture was chaired by Norman Augustine, head of Martin Marietta, and Charles Vest, President of MIT.

Order from: Association for Engineering Education, 1818 N St. NW, Suite 600, attn. Nicole Michels, Washington, DC 20036; tel. 202/331-3537; fax 202/265-8504.

From the National Academy of Sciences (NAS):

Rights and Responsibilities of Participants in Networked Communities (160 pp., $29), report based on meetings sponsored by the NAS Computer Science and Telecommunications Board and the American Association for the Advancement of Science and the American Bar Association. Chapter headings include: "Legal Considerations for Electronic Networks," "Free Speech," "Electronic Vandalism," "Intellectual Property Interests," and "Privacy."

Editors are Dorothy E. Denning, Professor of Computer Science, Georgetown University, and Herbert S. Lin, of the Academy staff.

Order from: National Academy Press, 2101 Constitution Ave. NW, Washington, DC 20418; tel. 1-800/624-6242; in Washington, DC, area: 202/334-3313.

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